

REMARKS:

The examiner is thanked for the Office Action dated April 23, 2002. In response thereto, applicants have amended the specification, claims and drawings. No new matter has been added.

Regarding the specification, applicants have amended the first paragraph of the specification to include specific reference to prior applications, including reference to Application Nos. 09/277,872, 08/089,595 and 07/822,201, as requested by the examiner. Applicants have also amended the specification on page 22, in response to the examiners objection.

The examiner has objected to the term “detector” in claims 27, 42 and 48. Applicants traverse this objection. Applicants submit that proper antecedent basis for “detector” is provided in the specification. Specifically, the specification provides on page 4, line 24 through page 5, line 7: “A first plurality of detectors are provided, and each detector is positioned proximate one of the fixtures and is actuatable to request operation of the associated fixture. Control means are operably associated with each of the flow regulating means and with the detectors for causing operation of a flow regulating means upon the expiration of at least a predetermined period subsequent to actuation of the associated detector, and for limiting the number of operations of each flow regulating means per unit time.” Furthermore, antecedent basis is provided in U.S. Patent No. 4,914,758, the disclosure of which is incorporated in the present application by reference at page 14, line 25 through page 15, line 4. (See ‘758 patent, column 4, lines 44-54). Therefore, applicants respectfully requests that this objection be withdrawn.

Regarding the drawings, applicants have amended Figures 4 and 11, as requested by the examiner, and submitted amended drawings pursuant to MPEP §608.02(r). A Letter to the Draftsperson is attached hereto pursuant to MPEP §608.02(v). The examiner has also objected to the term “light” in claims 38 and 44, and states that same must be shown in the Figures. Applicants respectfully traverse this objection. Both claims 38 and 44 provide that each one of the indicators (from proceeding claims 37 and 43, respectively) is a light. The “indicator lights” as claimed and disclosed in the specification, are indicated in Figure 1 by reference numeral 34. The indicator lights are also identified in the Specification at page 11, lines 19-21, and page 15, line 21 through page 16, line 1.

The examiner has rejected claims 27, 34, 35, 48 and 49 as being anticipated by Robertshaw, U.S. Patent No. 4,471,498. Claims 27, 35, 48 and 49 have also been rejected as being anticipated by Atkins et al., U.S. Patent No. 3,314,081. Applicants traverse these rejections.

Neither Robertshaw, nor Atkins et al., discloses a water control system having a controller for delaying operation of a fixture for a selected period of time that is adjustable, as claimed by applicants. Note that claims 27, 42, 48 and 49 have been amended to clarify applicants’ invention. Claims 35 and 47 have been cancelled without prejudice. Operation of a fixture is delayed for a selected or predetermined period of time. (See Specification, page 4, lines 13-19, and page 14, lines 1-2). However, this selected period is not fixed. Rather, the delay may be adjusted as required, based upon time of day, and between cells and cell blocks as desired. (See Specification, page 14, lines 12-14, wherein time period may be adjusted as described for adjustability of

maximum usage rate). Therefore, the adjustable selected time may be, for example, approximately two minutes, but may also be some other period of time as required at a particular facility or in a particular cell block. Therefore, a user may adjust, and subsequently change, the period of delay as desired.

Robertshaw fails to disclose a controller that delays operation of a fixture for an adjustable selected period of time. Rather, the '498 patent provides for delay timing circuits D1 and D2, which control the frequency of fixture operations within a predetermined period. (See '498 patent, column 2, lines 32-51). Specifically, the timing circuits include resistors and transistors, which create a predetermined delay. (See '498 patent, column 3, lines 43-52). Therefore, although Robertshaw provides for a predetermined delay period, this period is not adjustable. It may be selected, given a particular timing chip may be selected upon installation of the water control system. However, once installed, the selected time delay may not be adjusted. Therefore, Robertshaw does not anticipate applicants' invention, which has an adjustable selected period of time for delaying fixture operation.

Likewise, Atkins et al., fails to disclose a controller that delays operation of a fixture for an adjustable selected period of time. Similar to Robertshaw, the '081 patent also provides for a circuit 18 which delays operation of a fixture, and includes a series of resistors and capacitors. (See '081 patent, column 2, lines 52-64). Thus, the controller 18 (as described in the '081 patent, column 5, lines 6 – column 6, line 2) includes a predetermined delay time. However, this delay period is not adjustable. To the contrary, once the system disclosed in the '081 patent is installed, the delay period remains the same, and may not be adjusted without replacing the system or a component thereof.

Applicants' invention is particularly well suited for control of water flow in a prison because of the adjustable feature of the selected time period. The delay may be adjusted as required, and may differ from cell block to cell block, and/or time of day. (See Specification, page 13, lines 22-25). The systems disclosed in the prior art of record do not provide for an adjustable system. Selection of the predetermined time during installation does not allow for an adjustable selected period after such systems are installed, given the same predetermined time period controls fixture operation. Water systems developed for prisons must accommodate unique issues and problems encountered in such facilities. (See Specification, pages 2-3). Therefore, adjustability of the selected period of delay for fixture operation is important. Systems disclosed by Robertshaw and Atkins et al. do not provide for such flexibility.

The examiner also rejects claim 36 as being obvious over Robertshaw, and rejects claims 34 and 36 as being obvious over Atkins et al. Applicants traverse these rejections. Claims 34 and 36 depend from claim 27, and therefore applicants incorporate the arguments set forth above. A user may select a delay period of about two minutes. However, the selected period remains adjustable, as explained above, and as clarified in the amended claims. As noted in the Specification, a delay period of two minutes may be selected based on sanitation criteria. (See Specification, page 14, lines 8-18). This delay period may thereafter be re-adjusted, depending on facility requirements or time of day, as explained above.

The examiner also rejects claims 28-33 and 42 as being obvious over Atkins et al. and Bellamy, U.S. Patent No. 2,590,147. In addition to arguments set forth above, Bellamy does not disclose a flushing system based on use of a particular fixture. Rather,

Bellamy discloses a cistern flushing system, wherein a plurality of fixtures are flushed based on a timing device T. Each fixture is not, however, independently controlled. Therefore, the controller disclosed in Bellamy simply causes the sequential operation of all fixtures. (See '147 patent, column 6, lines 58-67). Although the operation may be set for different cycles (day/night), it operates continuously. Bellamy also fails to disclose a controller that controls each one of a plurality of fixtures, as claimed by applicants. Neither Atkins et al. nor Bellamy disclose a system that controls fixture operation for an adjustable selected period of time. Therefore, applicants submit that this rejection may be properly withdrawn.

The examiner rejects claims 37-39, 43-44 and 47 as being obvious over Atkins et al. and Bellamy, and further in view of Morris et al., U.S. Patent No. 4,195,374. Morris et al. discloses an overflow inhibiting circuit (i.e. a shut-off switch). The examiner states that Morris et al. teaches a valve status indicator associated with a controlled fixture. Although the use of indicator lights is referenced therein, it fails to disclose a controller with an adjustable time delay as claimed by applicants. Given claims 37-39 and 43-44 depend from claims discussed above, the examiner's rejections may be withdrawn for all of the reasons set forth herein.

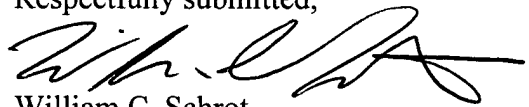
Likewise, the examiner's rejection of claims 40-41, 45-46 and 50 as being obvious over Atkins et al. and Bellamy, in further view of Fraser, U.S. Patent No. 2,786,210, should be withdrawn based on the above. The examiner states that a disabling switch associated with a particular electrically controlled device operating in a system of such devices is obvious, and further states that such a master switch associated with a control system would also be notoriously obvious. Applicants respectfully submit that

the examiner's characterization of their invention is oversimplified. Fraser fails to disclose disabling switches or a master switch that disables an individual fixture, or a group of fixtures, by a centralized controller that may also delay operation of fixture operation of other fixtures simultaneously. (i.e. disabling some fixtures while delaying others). The indicators are provided to notify when a fixture is continually being operated, and provides additional control for a user. (See Specification, page 15, line 26 – page 16, line 1. This feature is claimed in conjunction with the unique controller system claimed by applicants. As such, applicants submit that the rejections may be properly withdrawn.

Regarding the examiner's nonstatutory double patenting rejection, applicants file a terminal disclaimer herewith at Appendix B, wherein the expiration of any patent granted on this application will expire with the expiration date of U.S. Patent No. 4,985,944, filed July 20, 1989, of Daniel C. Shaw, titled Plumbing Control System and Method for Prisons. Both the present application and the '944 patent are commonly owned by assignee Sloan Valve Company. A Statement under 37 C.F.R. 3.73(b), with the chain of title therein, is also filed herewith at Appendix B.

It is respectfully submitted that all of the examiner's objections and rejections are addressed herein, and applicants respectfully request that same be withdrawn. Wherefore, applicants further submit that all claims are now in condition for allowance, and applicants earnestly solicit same. A request for an extension of time is submitted concurrently herewith. It is believed that no other fees are due with this submission. Should that determination be incorrect, then please debit Account No. 50-0548 and notify the undersigned.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'W. C. Schrot', with a stylized flourish at the end.

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APPENDIX C: Amended Claims with Underlying and Bracketing

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28. A water control system for prisons, comprising:

a fixture;

a source of water;

a valve interposed between said fixture and said source of water for controlling water flow therebetween;

a detector operably associated with said fixture for requesting operation of said fixture; and

a controller operably associated with said valve and said detector, said controller for delaying operation of said fixture for [a] an adjustable selected period of time after actuation of said detector.

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43. A water control system for prisons, comprising:

a plurality of fixtures;

a source of water;

a plurality of valves for controlling water flow, each one of said plurality of valves interposed between a corresponding one of said plurality of fixtures and said source of water;

a plurality of detectors operably associated with said plurality of fixtures, each one of said plurality of detectors for requesting operation of one of said plurality of fixtures; and

a controller remotely located from said plurality of fixtures and operably associated with said plurality of valves and said plurality of detectors, said controller comprising a first plurality of leads for receiving demand signals from said plurality of detectors, each demand signal for requesting operation of one of said plurality of fixtures, a second plurality of leads for transmitting control signals, each control signal for initiating operation of one of said plurality of fixtures, said controller determining which one of said plurality of detectors is requesting operation and causing a delay in operation for [a] an adjustable selected period of time subsequent to actuation of one of said plurality of detectors.

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50.

A method of controlling water flow in a prison plumbing system, comprising the steps of:

initiating a demand signal from a detector operably associated with a plumbing fixture;

determining which detector and associated fixture is requesting operation upon receipt of the demand signal;

delaying operation of a valve operably associated with the fixture, thereby delaying operation of the fixture, for [a] an adjustable selected period of time subsequent to actuation of the detector; and

permitting operation of the fixture after expiration of the adjustable selected period of time.

49
51.

The method of claim 48, further comprising the step of adjusting the adjustable selected period of time for delaying operation of the fixture.